

# A study comparing intermittent with continuous treatment with BTK inhibitors in chronic lymphocytic leukaemia (CLL)

<b>Submission date</b> 21/06/2022	<b>Recruitment status</b> Recruiting	<input checked="" type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
<b>Registration date</b> 27/06/2022	<b>Overall study status</b> Ongoing	<input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results
<b>Last Edited</b> 25/09/2025	<b>Condition category</b> Cancer	<input type="checkbox"/> Individual participant data <input checked="" type="checkbox"/> Record updated in last year

## Plain English summary of protocol

### Background and study aims

Ibrutinib and acalabrutinib are part of a group of drugs for chronic lymphocytic leukaemia (CLL) called targeted drugs. Targeted drugs have fewer side effects than traditional chemotherapy. However, as the drug is usually taken for several years, these side effects can be a burden.

There is some evidence that, if ibrutinib or acalabrutinib is taken for several years, the CLL is more likely to become resistant to this treatment. STATIC will investigate whether having a break from treatment will work as well as continuing treatment without a break, if whether taking a break from treatment reduces side effects, whether it lowers the risk of CLL becoming resistant to ibrutinib or acalabrutinib, and whether there is any difference in the overall cost of CLL treatment. We also want to know whether having a break from treatment changes how patients are feeling emotionally.

### Who can participate?

830 patients will be enrolled into the STATIC trial. These patients will be made up of patients who have been treated on the NHS with ibrutinib or acalabrutinib as their second or subsequent treatment for their CLL as well as those who have been treated in other studies called the FLAIR and ICICLLe trials, and those who have been treated with ibrutinib in standard care as their first line of treatment.

### What does the study involve?

Patients in the randomisation trial will be randomly allocated to have either continuous or intermittent treatment with the same BTK inhibitor they have already been treated with. A small number of patients finishing FLAIR will be advised to continue ibrutinib as their CLL is not well controlled enough for them to take part in the randomised trial and they can continue ibrutinib treatment in STATIC without being randomised.

### What are the possible benefits and risks of participating?

We hope that participants will be helped by taking part in this study, but we can't guarantee this. However, the information we get from this study will contribute to medical research and help us

improve future treatments for people who have CLL. As we learn more about the effects of taking ibrutinib and acalabrutinib for longer periods of time, pausing treatment for periods, and how this changes the side effects, this may lead to future changes in treatment for CLL patients. The STATIC Randomised trial will help to understand whether pausing treatment when CLL is well controlled is as good as continuing treatment without a break. Both the randomised trial and clinical need group will give us information about the effects of taking ibrutinib and acalabrutinib for a long time as well as the benefits and safety of ibrutinib and acalabrutinib. Both participants who are randomised to continuous treatment and who enter the patient need cohort will receive treatment for longer periods than standard care, which may prolong the presence of side effects. Participants will be closely monitored and will attend regular outpatient appointments to monitor this, and the side effects can often be managed by lowering drug dose or taking supportive medication. Participants randomised to the intermittent treatment may have concerns about pausing treatment. However, treatment will only be paused in the trial when a patient is in a good remission, which may last for some considerable time, and will resume treatment when there are early signs of CLL reappearing.

Where is the study run from?  
University of Leeds (UK)

When is the study starting and how long is it expected to run for?  
June 2022 to September 2031

Who is funding the study?  
National Institute for Health and Care Research (NIHR) Health Technology Assessment programme (UK)  
Janssen-Cliag (UK)

Who is the main contact?  
Doina Levinte  
static@leeds.ac.uk

<https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-trial-looking-at-ibrutinib-with-and-without-treatment-breaks-for-chronic-lymphocytic-leukaemia-static>

## Contact information

**Type(s)**  
Scientific

**Contact name**  
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## Additional identifiers

**Clinical Trials Information System (CTIS)**  
2021-005854-27

**Integrated Research Application System (IRAS)**  
1003615

**ClinicalTrials.gov (NCT)**  
Nil known

**Protocol serial number**  
HM21/142069, IRAS 1003615, CPMS 52879

## Study information

### Scientific Title

A randomised phase III trial comparing intermittent with continuous treatment strategies in chronic lymphocytic leukaemia (CLL)

**Acronym**  
STATIC

### Study objectives

Current study objectives as of 07/07/2025:

An intermittent treatment strategy using a BTK inhibitor (including ibrutinib or acalabrutinib) will reduce treatment-emergent resistance and thus be at least non-inferior to continuous treatment with regards to time to treatment strategy failure whilst reducing resource impact for the NHS and improving quality of life.

Previous study objectives:

An intermittent treatment strategy using ibrutinib, will reduce treatment-emergent resistance and thus be at least non-inferior to continuous treatment with regards to time to treatment strategy failure whilst reducing resource impact for the NHS and improving quality of life.

### Ethics approval required

Old ethics approval format

### Ethics approval(s)

1. Approved 10/08/2022, HRA and Health and Care Research Wales (HCRW) (Health Research Authority, 2 Redman Place, London, E20 1JQ, United Kingdom; Tel: N/A; approvals@hra.nhs.uk), ref: 1003615
2. Approved 03/08/2022, MHRA (10 South Colonnade, Canary Wharf, London, E14 4PU, United Kingdom; +44 (0)20 3080 6000; info@mhra.gov.uk), ref: 1003615
3. Approved 02/08/2022, Health Research Authority (REC), North East - York Research Ethics Committee (North East - York Research Ethics Committee, NHSBT Newcastle Blood Donor

Centre, Holland Drive, Newcastle upon Tyne, NE2 4NQ, United Kingdom; +44 (0)207 104 8079; york.rec@hra.nhs.uk), ref: 1003615

## **Study design**

STATIC is designed with multiple pathways, the 'Randomization Pathway' and the 'Clinical Need Cohort', which route a participant enters will be determined by their eligibility.

**Randomisation Trial:** A prospective, national, multicentre, open-label, randomized, controlled, two-arm, parallel-group, non-inferiority, Phase III trial to assess whether patients with CLL on long-term treatment with a BTK inhibitor (including ibrutinib or acalabrutinib) have similar disease control with an intermittent treatment strategy (experimental arm) compared with standard continuous treatment (control arm).

**Clinical Need Cohort:** A prospective, national, multicentre, open-label, single-arm, non-randomized cohort to assess the safety and overall survival of patients with CLL receiving long-term continuous treatment with ibrutinib.

## **Primary study design**

Interventional

## **Study type(s)**

Treatment

## **Health condition(s) or problem(s) studied**

Chronic lymphocytic leukaemia (CLL)

## **Interventions**

Current interventions as of 07/07/2025:

In the randomisation pathway, participants will be randomised 1:1 to either intermittent treatment with a BTK inhibitor, known as the 'pausing treatment' arm, or continuous treatment. Participants randomised to continuous treatment will receive either ibrutinib (oral) 420 mg per day (or other reduced dose, if that dose has been stable for the past 6 months and there are no unresolved toxicities) or acalabrutinib (oral) 200 mg per day (or other reduced dose, if that dose has been stable for the past 6 months and there are no unresolved toxicities), until strategy failure, defined as active disease as per 2018 iwCLL criteria, death, or the end of the trial.

Participants randomised to the 'pausing treatment' arm (intermittent treatment strategy) will pause BTK inhibitor treatment immediately following randomisation, and restart when the restart criteria are met. When treatment restarts, participants restart BTK inhibitor treatment at the standard dose (or their previous stable reduced dose) until the treatment pausing criteria are met. The pausing and resuming criteria are assessed locally every 3 months at standard clinic visits. Participants can pause and restart treatment multiple times until treatment strategy failure (defined as active disease per 2018 iwCLL criteria) whilst on treatment, death, or end of the study.

In the Clinical Need Cohort all participants will receive ibrutinib (continuous treatment), either at the recommended starting dose or the stable reduced dose they were receiving at the end of the FLAIR or ICLLLe trial, but will not be randomised. Participants in the Clinical Need Cohort will receive treatment during the trials 6 6-year recruitment period and for the 3 years of follow-up, meaning that participants will be on the trial for between 3-9 years, depending upon when they enter the trial.

#### Previous interventions:

In the randomisation pathway participants will be randomised 1:1 to either intermittent ibrutinib, known as the 'pausing ibrutinib' arm, or continuous ibrutinib treatment. Participants randomised to continuous treatment will receive ibrutinib (oral) 420 mg per day (or other reduced dose, if that dose has been stable for the past 6 months and there are no unresolved toxicities) until strategy failure, defined as active disease as per 2018 iwCLL criteria, death, or the end of the trial.

Participants randomised to the 'pausing ibrutinib' arm (intermittent treatment strategy) will pause ibrutinib treatment immediately following randomisation, and restart when the restart criteria are met. When treatment restarts, participants restart ibrutinib treatment at the standard dose (or their previous stable reduced dose) until the treatment pausing criteria are met. The pausing and resuming criteria are assessed locally every 3 months at standard clinic visits. Participants can pause and restart treatment multiple times until treatment strategy failure (defined as active disease per 2018 iwCLL criteria) whilst on treatment, death, or end of the study.

In the Clinical Need Cohort all participants will receive ibrutinib (continuous treatment), either at the recommended starting dose, or the stable reduced dose they were receiving at the end of the FLAIR trial, but will not be randomised. Participants in the Clinical Need Cohort will receive treatment during the trial's 6 year recruitment period and for the 3 years of follow up, meaning that participants will be on the trial for between 3-9 years, depending upon when they enter the trial.

#### **Intervention Type**

Drug

#### **Phase**

Phase III

#### **Drug/device/biological/vaccine name(s)**

Ibrutinib (Imbruvica), acalabrutinib (Calquence)

#### **Primary outcome(s)**

Time to treatment strategy failure. Time to treatment strategy failure is defined as the time from randomisation to time of treatment strategy failure. Treatment strategy failure is defined as the first documented instance of active disease that does not respond to treatment, or death from any cause measured using patient records throughout the study

#### **Key secondary outcome(s)**

1. Overall survival will be measured for the randomisation trial as the time from randomisation to the time of death from any cause. In the clinical need cohort this will be calculated as the time from registration to the time of death from any cause.
2. Toxicity and tolerability based on adverse events, as graded by CTCAE V5.0 and determined by routine clinical assessments at each centre.
3. Cost-effectiveness is defined as a cost per incremental QALY below £20,000 and/or a positive incremental net monetary benefit. The cost-effectiveness of treatment options will be evaluated with respect to this criteria.
4. Quality of life will be assessed using the patient-reported outcome measures: EORTC-QLQ-C30, EORTC-QLQ-CLL and EQ-5D-5L. This will be measured in the randomisation trial only and will be recorded at baseline and after 3, 6, 12, 18, 24, 30, 36 and 48 months of trial treatment.

5. Summative treatment-free Interval is defined as the time to treatment strategy failure, excluding any time spent on treatment.
6. Response to retreatment in intermittent treatment arm will be assessed as a patients response (partial remission (PR), stable disease (SD) or progressive disease (PD) according to the response criteria defined by the standard 2018 iwCLL criteria) between 9 and 12 months after restarting treatment.
7. Time to next treatment is defined as the time from randomisation to the start date of the next line of treatment. For the Clinical Need Cohort, this will be time from registration to the start date of the next line of treatment.
8. Response to next treatment for CLL will be assessed as the best response (PR, SD or PD according to the response criteria defined by the standard 2018 iwCLL criteria) achieved by a participant at any timepoint.
9. Rate of resistance mutation between trial arms will be assessed as the proportion of participants in each arm with a detectable BTK mutation at baseline, 24 months and 48 months for all randomised participants, and at 12, 36 months for those participants in whom a BTK mutation is detected.
10. Evolution of resistant sub-clones will be assessed as the proportion of BTK mutations that are identified over time. It will be assessed at baseline and following 24 and 48 months of trial treatment. If resistant subclones are present, biobank samples collected at 12 and 36 months of trial treatment, will be used to identify the onset of these subclones.

### **Completion date**

01/09/2031

## **Eligibility**

### **Key inclusion criteria**

Current key inclusion criteria as of 25/09/2025:

Trial Registration Inclusion Criteria:

1. At least 18 years old
2. A diagnosis of chronic lymphocytic leukaemia (CLL) or small lymphocytic lymphoma (SLL) (by 2018 iwCLL criteria)
3. World Health Organisation (WHO) performance status (PS) of 0,1, or 2
4. Biochemical values must be within the following limits within 4 weeks prior to randomisation /or registration for the Clinical Need Cohort and at baseline:
  - 4.1. Alanine aminotransferase (ALT)  $\leq 3$  x upper limit of normal (ULN) OR Aspartate aminotransferase (AST)  $\leq 3$  x ULN.
  - 4.2. Total bilirubin  $\leq 1.5$  x ULN, unless bilirubin rise is due to Gilbert's syndrome or of non-hepatic origin
5. Agree to follow the pregnancy prevention plan\*
6. Able to provide informed consent

\*Participants randomised to the pause/resume arm must adhere to this whilst receiving treatment with a BTK inhibitor, but will not be required to follow contraceptive measures during the planned treatment breaks

Additional inclusion criteria for participants in the Clinical Need Cohort:

1. Meet all of the Registration Inclusion criteria
2. Currently receiving ibrutinib and nearing the end of or having completed 6 years of ibrutinib treatment on FLAIR or IcCLLe\*\*
3. Have signs of progressive or returning CLL after completing 6 years of ibrutinib treatment within FLAIR or IcCLLe, but prior to entry into STATIC

Additional inclusion criteria for Front Line participants entering the randomisation trial:

1. Meet all of the Registration Inclusion criteria
2. Currently receiving front-line treatment with ibrutinib and received at least 6 years through standard care, or currently receiving front-line treatment with ibrutinib and approaching the end of 6 years of treatment in FLAIR or ICIcLLe, or having already completed 6 years of ibrutinib treatment in FLAIR or ICIcLLe. \*\*
3. In clinical remission, all of the following:
  - 3.1. No palpable lymph nodes;
  - 3.2. No palpable spleen; and
  - 3.3. Lymphocyte count below  $5 \times 10^9/L$  continuously for at least 12 months before randomisation

\*\*Patients should enter STATIC on completion of treatment in FLAIR or ICIcLLe, with no break in therapy, with the exception of participants who have completed the 6 years of treatment in FLAIR or ICIcLLe prior to STATIC opening

Additional inclusion criteria for Previously Treated participants entering the randomisation trial:

1. Meet all of the registration inclusion criteria
2. Currently receiving ibrutinib or acalabrutinib for at least the previous 36 months as the second or subsequent line of treatment. There is no restriction on the maximum duration of treatment prior to enrolment.
3. In clinical remission, fulfilling all of the following:
  - 3.1. No palpable lymph nodes;
  - 3.2. No palpable spleen; and
  - 3.3. Lymphocyte count below  $5 \times 10^9/L$  at the time of assessing eligibility

Previous inclusion criteria as of 07/07/2025:

Trial Registration Inclusion Criteria:

1. At least 18 years old
2. A diagnosis of chronic lymphocytic leukaemia (CLL) or small lymphocytic lymphoma (SLL) (by 2018 iwCLL criteria)
3. World Health Organisation (WHO) performance status (PS) of 0,1 or 2
4. Biochemical values must be within the following limits within 4 weeks prior to randomisation /or registration for the Clinical Need Cohort and at baseline:
  - 4.1. Alanine aminotransferase (ALT)  $\leq 3 \times$  upper limit of normal (ULN) OR Aspartate aminotransferase (AST)  $\leq 3 \times$  ULN.
  - 4.2. Total bilirubin  $\leq 1.5 \times$  ULN, unless bilirubin rise is due to Gilbert's syndrome or of non-hepatic origin
5. Agree to follow the pregnancy prevention plan\*
6. Able to provide informed consent

\*Participants randomised to the pause/resume arm must adhere to this whilst receiving treatment with a BTK inhibitor, but will not be required to follow contraceptive measures during the planned treatment breaks

Additional inclusion criteria for participants in the Clinical Need Cohort:

1. Meet all of the Registration Inclusion criteria
2. Currently receiving ibrutinib and nearing the end or having completed 6 years of ibrutinib treatment on FLAIR or ICIcLLe\*\*
3. Have signs of progressive or returning CLL after completing 6 years of ibrutinib treatment within FLAIR or ICIcLLe, but prior to entry into STATIC

Additional inclusion criteria for Front Line participants entering the randomisation trial:

1. Meet all of the Registration Inclusion criteria
2. Currently receiving ibrutinib in FLAIR or ICLLLe, or having completed 6 years of ibrutinib of ibrutinib in FLAIR or ICLLLe\*\*
3. In clinical remission all of the following:
  - 3.1. No palpable lymph nodes;
  - 3.2. No palpable spleen; and
  - 3.3. Lymphocyte count below  $5 \times 10^9/L$  continuously for at least 12 months before randomisation

\*\*Patients should enter STATIC on completion of treatment in FLAIR or ICLLLe, with no break in therapy, with the exception of participants who have completed the 6 years of treatment in FLAIR or ICLLLe prior to STATIC opening

Additional inclusion criteria for Previously Treated participants entering the randomisation trial:

1. Meet all of the registration inclusion criteria
2. Currently receiving ibrutinib or acalabrutinib for at least the previous 36 months as the second or subsequent line of treatment. There is no restriction on maximum duration of treatment prior to enrolment.
3. In clinical remission fulfilling all of the following:
  - 3.1. No palpable lymph nodes;
  - 3.2. No palpable spleen; and
  - 3.3. Lymphocyte count below  $5 \times 10^9/L$  at the time of assessing eligibility

Previous inclusion criteria:

Trial Registration Inclusion Criteria:

1. At least 18 years old
2. A diagnosis of chronic lymphocytic leukaemia (CLL) or small lymphocytic lymphoma (SLL) (by 2018 iwCLL criteria)
3. World Health Organisation (WHO) performance status (PS) of 0,1 or 2
4. Biochemical values must be within the following limits within 4 weeks prior to randomisation /or registration for the Clinical Need Cohort and at baseline:
  - 4.1. Alanine aminotransferase (ALT)  $\leq 3 \times$  upper limit of normal (ULN) OR Aspartate aminotransferase (AST)  $\leq 3 \times$  ULN.
  - 4.2. Total bilirubin  $\leq 1.5 \times$  ULN, unless bilirubin rise is due to Gilbert's syndrome or of non hepatic origin
5. Agree to follow the pregnancy prevention plan\*
6. Able to provide informed consent

\*Participants randomised to the pause/resume arm must adhere to this whilst receiving ibrutinib, but will not be required to follow contraceptive measures during the planned treatment breaks

Additional inclusion criteria for participants in the Clinical Need Cohort:

1. Meet all of the Registration Inclusion criteria
2. Currently receiving ibrutinib and nearing the end or having completed 6 years of ibrutinib treatment on FLAIR\*\*
3. Have signs of progressive or returning CLL after completing 6 years of ibrutinib treatment within FLAIR, but prior to entry into STATIC

Additional inclusion criteria for Front Line participants entering the randomisation trial:

1. Meet all of the Registration Inclusion criteria
2. Currently receiving ibrutinib in FLAIR or having completed 6 years of ibrutinib of ibrutinib in FLAIR\*\*

3. In clinical remission all of the following:

3.1. No palpable lymph nodes;

3.2. No palpable spleen; and

3.3. Lymphocyte count below  $5 \times 10^9/L$  continuously for at least the 12 months before randomisation

\*\*Patients should enter STATIC on completion of treatment in FLAIR, with no break in therapy, with the exception of participants who have completed the 6 years of treatment in FLAIR prior to STATIC opening

Additional inclusion criteria for Previously Treated participants entering the randomisation trial:

1. Meet all of the registration inclusion criteria

2. Currently receiving ibrutinib for at least the previous 36 months. There is no restriction on maximum duration of treatment prior to enrolment.

3. In clinical remission fulfilling all of the following:

3.1. No palpable lymph nodes;

3.2. No palpable spleen; and

3.3. Lymphocyte count below  $5 \times 10^9/L$  continuously for at least the 12 months before randomisation

### **Participant type(s)**

Patient

### **Healthy volunteers allowed**

No

### **Age group**

Adult

### **Lower age limit**

18 years

### **Sex**

All

### **Key exclusion criteria**

Current exclusion criteria as of 07/07/2025:

Trial Registration Exclusion Criteria:

1. Pregnant females

2. Known intolerance or hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption.

3. Receipt of live vaccination within 4 weeks prior to registration and for the duration of the study.

4. History or current evidence of Richter's transformation

5. Major surgery within 4 weeks prior to randomisation/or registration for the Clinical Need Cohort

6. Active infection

7. Concomitant warfarin (or equivalent vitamin K inhibitor)

8. Central nervous system involvement with CLL

9. Cardiac failure; including symptomatic cardiac failure not controlled by therapy, or unstable angina not adequately controlled by current therapy (in patients with a significant cardiac history the left ventricular function should be assessed and patients with severe impairment

should be excluded)

10. Respiratory impairment (e.g. bronchiectasis or severe COPD)

11. Other severe, concurrent diseases or mental disorders that could interfere with their ability to participate in the study

12. Positive serology for Hepatitis B (HB), defined as a positive test for HBsAg. In addition, if negative for HBsAg but HBcAb positive (regardless of HBsAb status), aHB DNA test will be performed and if positive, the patients will be excluded. During treatment, these participants should be monitored and managed to prevent HBV reactivation.

13. Positive serology for Hepatitis C (HC) defined as a positive test for HCAb, in which case reflexively perform a test for hepatitis C RNA (for example, HCV RNA PCR). If positive, the patients will be excluded.

14. Persisting severe pancytopenia (neutrophils  $<0.5 \times 10^9/L$  or platelets  $<50 \times 10^9/L$ ) unless due to direct marrow infiltration by CLL

15. Current treatment with prednisolone of  $>20\text{mg/day}$

16. Uncontrolled Active haemolysis

17. History of stroke or intracranial haemorrhage within 6 months prior to enrolment.

18. Requirement for treatment with a strong CYP3A inhibitor or inducer

19. New treatment with two or more antiplatelet drugs, treatment that has been administered at a stable dose for at least 3 months prior to registration is permissible

Additional exclusion criteria for participants in the Clinical Need Cohort:

1. Meet none of the registration exclusion criteria

2. Active Disease, as per the 2018 iwCLL criteria requiring an alternative therapy.

3. Received treatment other than ibrutinib for CLL since completing FLAIR

4. Be eligible for front-line randomisation

5. Ibrutinib treatment break for toxicity/patient choice for more than 28 days in the last 12 months (added 07/11/2024)

Additional exclusion criteria for Front-Line participants entering the randomisation trial:

1. Meet any of the registration exclusion criteria

2. Disease progression (according to 2018 iwCLL criteria)

3. Ibrutinib treatment break for toxicity/patient choice for more than 28 days in the last 12 months

Additional exclusion criteria for Previously Treated participants entering the randomisation trial:

1. Meet any of the registration exclusion criteria

2. Disease progression (according to 2018 iwCLL criteria)

3. Ibrutinib or acalabrutinib treatment break for toxicity/patient choice for more than 28 days in the last 12 months

4. Any illness, disease or condition, such as active cancer or secondary primary malignancy (SPM), with a prognosis of less than 5 years

5. Patients with a creatinine clearance of less than  $30\text{ml/min}$  (either measured or derived by the Cockcroft Gault formula or an alternative locally approved formula).

Previous exclusion criteria:

Trial Registration Exclusion Criteria:

1. Pregnant females

2. Known intolerance or hereditary problems of galactose intolerance, total lactase deficiency or glucose-galactose malabsorption.

3. Receipt of live vaccination within 4 weeks prior to registration and for the duration of the study.

4. History or current evidence of Richter's transformation

5. Major surgery within 4 weeks prior to randomisation/or registration for the Clinical Need Cohort
6. Active infection
7. Concomitant warfarin (or equivalent vitamin K inhibitor)
8. Central nervous system involvement with CLL
9. Cardiac failure; including symptomatic cardiac failure not controlled by therapy, or unstable angina not adequately controlled by current therapy (in patients with a significant cardiac history the left ventricular function should be assessed and patients with severe impairment should be excluded)
10. Respiratory impairment (e.g. bronchiectasis or severe COPD)
11. Other severe, concurrent diseases or mental disorders that could interfere with their ability to participate in the study
12. Positive serology for Hepatitis B (HB) defined as a positive test for HBsAg. In addition, if negative for HBsAg but HBcAb positive (regardless of HBsAb status), aHB DNA test will be performed and if positive the patients will be excluded. During treatment, these participants should be monitored and managed to prevent HBV reactivation.
13. Positive serology for Hepatitis C (HC) defined as a positive test for HCAb, in which case reflexively perform a test for hepatitis C RNA (for example HCV RNA PCR). If positive the patients will be excluded.
14. Persisting severe pancytopenia (neutrophils  $<0.5 \times 10^9/L$  or platelets  $<50 \times 10^9/L$ ) unless due to direct marrow infiltration by CLL
15. Current treatment with prednisolone of  $>20\text{mg/day}$
16. Uncontrolled Active haemolysis
17. History of stroke or intracranial haemorrhage within 6 months prior to enrolment.
18. Requirement for treatment with a strong CYP3A inhibitor or inducer
19. New treatment with two or more antiplatelet drugs, treatment that has been administered at a stable dose for at least 3 months prior to registration is permissible
20. Current treatment with any concomitant ACE inhibitors

Additional exclusion criteria for participants in the Clinical Need Cohort:

1. Meet none of the registration exclusion criteria
2. Active Disease, as per the 2018 iwCLL criteria requiring an alternative therapy.
3. Received treatment other than ibrutinib for CLL since completing FLAIR
4. Be eligible for front-line randomisation
5. Ibrutinib treatment break for toxicity/patient choice for more than 28 days in the last 12 months (added 07/11/2024)

Additional exclusion criteria for Front-Line participants entering the randomisation trial:

1. Meet none of the registration exclusion criteria
2. Disease progression (according to 2018 iwCLL criteria)
3. Ibrutinib treatment break for toxicity/patient choice for more than 28 days in last 12 months

Additional exclusion criteria for Previously Treated participants entering the randomisation trial:

1. Meet none of the registration exclusion criteria
2. Disease progression (according to 2018 iwCLL criteria)
3. Ibrutinib treatment break for toxicity/patient choice for more than 28 days in last 12 months
4. Any illness, disease or condition, such as active cancer or secondary primary malignancy (SPM), with a prognosis of less than 5 years
5. Patients with a creatinine clearance of less than  $30\text{ml/min}$  (either measured or derived by the Cockcroft Gault formula or alternative locally approved formula).

**Date of first enrolment**

13/10/2022

**Date of final enrolment**

01/09/2028

## **Locations**

**Countries of recruitment**

United Kingdom

England

Scotland

Wales

**Study participating centre**

**St James's Hospital**

Beckett Street

Leeds

United Kingdom

LS9 7TF

**Study participating centre**

**Aberdeen Royal Infirmary**

Foresterhill Road

Aberdeen

United Kingdom

AB25 2ZN

**Study participating centre**

**Good Hope Hospital**

Rectory Road

Sutton Coldfield

United Kingdom

B75 7RR

**Study participating centre**

**Heartlands Hospital**

Bordesley Green East

Bordesley Green

Birmingham  
United Kingdom  
B9 5ST

**Study participating centre**  
**Victoria Hospital (blackpool)**  
Whinney Heys Road  
Blackpool  
United Kingdom  
FY3 8NR

**Study participating centre**  
**Bradford Royal Infirmary**  
Duckworth Lane  
Bradford  
United Kingdom  
BD9 6RJ

**Study participating centre**  
**Castle Hill Hospital**  
Entrance 3  
Castle Road  
Cottingham  
United Kingdom  
HU16 5JQ

**Study participating centre**  
**Christie Hospital**  
Wilmslow Road  
Manchester  
United Kingdom  
M20 4BX

**Study participating centre**  
**Churchill Hospital**  
Churchill Hospital  
Old Road  
Headington  
Oxford  
United Kingdom  
OX3 7LE

**Study participating centre**

**Clatterbridge Hospital**

Clatterbridge Hospital

Clatterbridge Road

Wirral

United Kingdom

CH63 4JY

**Study participating centre**

**Derriford Hospital**

Derriford Road

Plymouth

United Kingdom

PL6 8DH

**Study participating centre**

**Grantham and District Hospital**

101 Manthorpe Road

Grantham

United Kingdom

NG31 8DG

**Study participating centre**

**The James Cook University Hospital**

Marlon Road

Middlesbrough

United Kingdom

TS4 3BW

**Study participating centre**

**Kent and Canterbury Hospitals NHS Trust**

Ethelbert Road

Canterbury

United Kingdom

CT1 3NG

**Study participating centre**

**Kettering General Hospital**  
Kettering General Hospital  
Rothwell Road  
Kettering  
United Kingdom  
NN16 8UZ

**Study participating centre**  
**Kings College Hospital**  
Mapother House  
De Crespigny Park  
Denmark Hill  
London  
United Kingdom  
SE5 8AB

**Study participating centre**  
**Leicester Royal Infirmary**  
Infirmary Square  
Leicester  
United Kingdom  
LE1 5WW

**Study participating centre**  
**Lincoln County Hospital**  
Greetwell Road  
Lincoln  
United Kingdom  
LN2 5QY

**Study participating centre**  
**Milton Keynes General Hospital**  
Milton Keynes Hospital  
Standing Way  
Eaglestone  
Milton Keynes  
United Kingdom  
MK6 5LD

**Study participating centre**

**Musgrove Park Hospital**  
Orthopaedic Triage Service  
Parkfield Drive  
Taunton  
United Kingdom  
TA1 5DA

**Study participating centre**  
**New Cross Hospital**  
Wolverhampton Road  
Wolverhampton  
United Kingdom  
WV10 0QP

**Study participating centre**  
**Northampton**  
Northampton General Hospital  
Cliftonville  
Northampton  
United Kingdom  
NN1 5BD

**Study participating centre**  
**Nottingham University Hospitals NHS Trust - City Campus**  
Nottingham City Hospital  
Hucknall Road  
Nottingham  
United Kingdom  
NG5 1PB

**Study participating centre**  
**Pilgrim Hospital (nuh)**  
Sibsey Road  
Boston  
United Kingdom  
PE21 9QS

**Study participating centre**  
**Poole**  
Poole Hospital  
Longfleet Road

Poole  
United Kingdom  
BH15 2JB

**Study participating centre**  
**Princess Royal University Hospital**  
Farnborough Common  
Orpington  
United Kingdom  
BR6 8ND

**Study participating centre**  
**Queen Alexandras Hospital**  
Southwick Hill Road  
Cosham  
Portsmouth  
United Kingdom  
PO6 3LY

**Study participating centre**  
**Gateshead Hospitals NHS Trust**  
Queen Elizabeth Hospital  
Sherriff Hill  
Gateshead  
United Kingdom  
NE9 6SX

**Study participating centre**  
**University Hospitals Birmingham NHS Foundation Trust**  
Queen Elizabeth Hospital  
Mindelsohn Way  
Edgbaston  
Birmingham  
United Kingdom  
B15 2GW

**Study participating centre**  
**Queens Hospital**  
Rom Valley Way

Romford  
United Kingdom  
RM7 0AG

**Study participating centre**  
**Rotherham District General Hospital**  
Moorgate Road  
Rotherham  
United Kingdom  
S60 2UD

**Study participating centre**  
**Royal Bournemouth General Hospital**  
Castle Lane East  
Bournemouth  
United Kingdom  
BH7 7DW

**Study participating centre**  
**Royal Cornwall Hospitals NHS Trust**  
Royal Cornwall Hospital  
Treliske  
Truro  
United Kingdom  
TR1 3LJ

**Study participating centre**  
**Royal Devon University Healthcare NHS Foundation Trust**  
Royal Devon University NHS Ft  
Barrack Road  
Exeter  
United Kingdom  
EX2 5DW

**Study participating centre**  
**Royal Hampshire County Hospital (rhch)**  
Romsey Road  
Winchester  
United Kingdom  
SO22 5DG

**Study participating centre**  
**Russells Hall Hospital**  
Pensnett Road  
Dudley  
United Kingdom  
DY1 2HQ

**Study participating centre**  
**Salisbury District Hospital**  
Salisbury District Hospital  
Odstock Road  
Salisbury  
United Kingdom  
SP2 8BJ

**Study participating centre**  
**Southmead Hospital**  
Southmead Road  
Westbury-on-trym  
Bristol  
United Kingdom  
BS10 5NB

**Study participating centre**  
**St. Bartholomews Hospital**  
West Smithfield  
London  
United Kingdom  
EC1A 7BE

**Study participating centre**  
**St Georges**  
St. Georges Hospital  
117 Suttons Lane  
Hornchurch  
United Kingdom  
RM12 6RS

**Study participating centre**

**Stoke Mandeville Hospital**

Mandeville Road  
Aylesbury  
United Kingdom  
HP21 8AL

**Study participating centre**

**Torbay and South Devon NHS Foundation Trust**

Torbay Hospital  
Newton Road  
Torquay  
United Kingdom  
TQ2 7AA

**Study participating centre**

**University College London Hospitals NHS Foundation Trust**

250 Euston Road  
London  
United Kingdom  
NW1 2PG

**Study participating centre**

**University Hospital Crosshouse**

Kilmarnock Road  
Kilmarnock  
United Kingdom  
KA2 0BE

**Study participating centre**

**Monklands District General Hospital**

Monkscourt Avenue  
Airdrie  
United Kingdom  
ML6 0JS

**Study participating centre**

**University Hospital of Wales**

Heath Park  
Cardiff  
United Kingdom  
CF14 4XW

**Study participating centre**  
**West Middlesex University Hospital**  
Twickenham Road  
Isleworth  
United Kingdom  
TW7 6AF

**Study participating centre**  
**The Worcestershire Royal Hospital**  
Newtown Road  
Worcester  
United Kingdom  
WR5 1ZL

**Study participating centre**  
**York Hospital**  
Wigginton Road  
York  
United Kingdom  
YO31 8HE

**Study participating centre**  
**The Royal Marsden Hospital (surrey)**  
Downs Road  
Sutton  
United Kingdom  
SM2 5PT

**Study participating centre**  
**Royal Shrewsbury Hospital**  
Mytton Oak Road  
Shrewsbury  
United Kingdom  
SY3 8XQ

**Study participating centre**  
**Ysbyty Gwynedd Hospital (yg NHS Trust)**  
Ysbyty Gwynedd

Penrhosgarnedd  
Bangor  
United Kingdom  
LL57 2PW

**Study participating centre**  
**Wrexham Maelor Hospital**  
Croesnewydd Road  
Wrexham Technology Park  
Wrexham  
United Kingdom  
LL13 7TD

**Study participating centre**  
**Ipswich Hospital**  
Heath Road  
Ipswich  
United Kingdom  
IP4 5PD

## Sponsor information

**Organisation**  
University of Leeds

**ROR**  
<https://ror.org/024mrx33>

## Funder(s)

**Funder type**  
Government

**Funder Name**  
Health Technology Assessment Programme

**Alternative Name(s)**  
NIHR Health Technology Assessment Programme, Health Technology Assessment (HTA), HTA

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

**Funder Name**

Janssen-Cilag Limited

**Funder Name**

National Institute for Health Research

**Alternative Name(s)**

National Institute for Health Research, NIHR Research, NIHRresearch, NIHR - National Institute for Health Research, NIHR (The National Institute for Health and Care Research), NIHR

**Funding Body Type**

Government organisation

**Funding Body Subtype**

National government

**Location**

United Kingdom

## Results and Publications

**Individual participant data (IPD) sharing plan**

The data sharing plans for the current study are unknown and will be made available at a later date.

**IPD sharing plan summary**

Data sharing statement to be made available at a later date

**Study outputs**

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
<a href="#">HRA research summary</a>			28/06/2023	No	No
<a href="#">Study website</a>	Study website	11/11/2025	11/11/2025	No	Yes